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Craniectomy for Double Optic Neuritis With Microcephaly.

(10)

BY

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[Reprinted from the "British Medical Journal," July 23rd, 1892.]

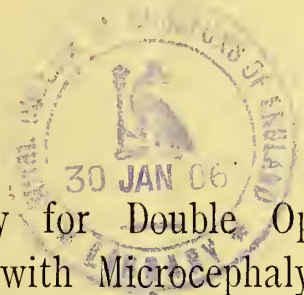
London

JOHN BALE & SONS

87 89, GREAT TITCHFIELD STREET, OXFORD STREET, W.

1892





Craniectomy for Double Optic Neuritis with Microcephaly.

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THE case here reported was one presenting such severe symptoms, and the treatment was so promptly followed by relief, that early publication may perhaps be justified without waiting for the further improvement which may reasonably be looked for.

The patient was a boy, 8 months old, microcephalic and exhibiting double optic neuritis; the resulting blindness being the cause of his parents' seeking treatment for him at the Western Ophthalmic Hospital. The spine and limbs were almost constantly extended and rigid, the thumbs were strongly adducted and the fingers firmly flexed over them; the legs also were tightly adducted, the right being crossed in front of the left. There was consequently much trouble in washing the child properly. The genital organs were somewhat peculiar, the penis being very small and retracted, so that only empty foreskin presented, but there was no phimosis; the right testicle was absent from the scrotum and canal, while the left was just outside the external abdominal ring. The urine was never projected in a stream, but dribbled away. There was very marked nystagmus and convergent squint, and the eyeballs were deeply drawn into the orbits, giving the child an aged and pained expression. Ophthalmoscopically there appeared severe optic neuritis and atrophy in both eyes, with some patches of choroidal pigment in the right. Though the pupils were dilated with atropine, the nystagmus prevented

the possibility of making anything like an exact drawing of the fundus oculi. Vision was manifestly reduced to mere perception of a strong light; the eyes never resting on any object. Swallowing was generally easy, but the child's attention had to be excited by moving the bottle-nipple about between the lips before sucking movements were initiated. When the legs happened not to be firmly extended, the knee-jerk was readily produced. The facial bones were well developed, the lower middle incisors were well through the gums and all the cranial sutures were completely ossified, no trace of a fontanelle being detectable. The mother stated that there was no soft space on the head at birth. The child had been born with the aid of forceps, which had not in any way marked the head or face. The coronal edge of the frontal bone was thick and raised above the parietals, and the left parietal bone was distinctly flatter than the right. All bony eminences on the cranium were but slightly marked, and the forehead was receding. The circumference around the upper margins of the orbits and the occipital protuberance was $15\frac{5}{8}$ inches, which is about the average measurement for a child of four months, that is, half the age of this child. The frontal eminences were only one inch from centre to centre; the forehead therefore was extremely narrow. The child was very strongly built, very restless, cried a good deal, was constipated habitually, but seldom sick. It displayed very little intellectual activity.

On March 21st, 1892, the head was shaved, and an antiseptic dressing put on. On the evening of this day the child was very nearly asphyxiated owing to ataxic deglutition. On the next day a linear craniectomy was performed. The chloroform was skilfully administered by my friend, Dr. Hulbert, of Windsor. This was no easy task, as the child's pulse was ordinarily irregular in force, and shortly after the operation was begun pulsation at the wrist quite ceased, but was restored by applying a large hot antiseptic sponge to the head, as recommended by Mr. Victor Horsley, and inflating the chest with oxygen from one of Brin's cylinders. This proceeding had to be repeated once or twice, but as more and more bone was removed the pulse continuously improved till, at the end of the operation, it was strong and perfectly regular in force and rhythm. The length of the bony excision was a little over 3 inches, beginning in front at the inner side of the left frontal

eminence, and extending backwards parallel to the sagittal suture. The opening was $\frac{1}{2}$ -inch wide, and from each end of its outer edge a short branch cut was made with gouge forceps, so as to leave the outer boundary of the bone wound in the form of a projecting flap unsupported at its two ends, thus allowing of some subsequent eversion by the brain pressure. The periosteum was removed from the whole area of the intended bone wound before using the trephine with which the osseous section was commenced, all the rest of the bone being cut away with forceps. The hæmorrhage was very slight, being mainly venous oozing from the dura mater, as that was separated from the superjacent bone. No vessels were tied. The scalp was replaced, and fixed with seven or eight silver sutures.

The child made an uninterrupted recovery, union of the scalp taking place throughout by first intention. The temperature, taken always in the rectum, never exceeded 100°F. , reaching that on only three occasions, and was promptly reduced by incising the upper front gums; the corresponding teeth at once appeared, and grew freely. The child took each night a powder containing hydrarg. c. cretâ gr. j, sodii bicarb. gr. ij, and sodii bromid. gr. ij.

The spastic condition of the limbs diminished from the time of the operation, and it was observable that on the day after there was no spasm at all in the right arm and hand, while a little remained for three or four days in the left. In a week both testicles were well down in the scrotum, the penis had emerged from its concealment, and the urine was projected in a vigorous stream. Some of the sutures were removed on the eighth day, and the others, one or two daily, till the eleventh day, when the child left the hospital completely healed. During this time the sight appreciably improved, the child noticing a hand in a good light; all nystagmus and squint disappeared, the eyeballs came forward in the orbits, and the little patient assumed the natural expression of a baby. Sucking and swallowing were prompt and spontaneous.

Five weeks after the operation, the circumference of the head, at the same level as before, had increased to 16 inches exactly, that is to say, a gain of $\frac{3}{8}$ ths of an inch, but the distance between the centres of the frontal eminences had increased by nearly half an inch.

A few days later still the child was able to stand, holding on by its hands to the upright bars of a nursery fender.

The vision had further improved, as evidenced by the child's following with its eyes any distinct objects moving about, and the intelligence had so increased that the little patient laughed like any other baby when played with and talked to after the manner of mothers and nurses.

The child was seen again on May 18th, 1892. The vision then was apparently still more acute, the intellectual activity greater, and the general health excellent. The notes of the case, which are here summarised, are for the most part due to Miss Boyce, the sister-in-charge at the Western Ophthalmic Hospital.